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Claims 1-7, 9-16, 18 and 20 stand rejected under 35 U.S.C. 103(a) over U.S. Patent No. 5,411,394 ("Beer") in view of U.S. Patent No. 6,282,901 ("Marin"). This rejection is respectfully traversed.

Claim 1 of this application requires, among other things, a step (D) in which an oxygen-rich stream (formed outside the combustion device, as set forth in step (C)) is fed into the flame in which the fuel is combusted.

Likewise, claim 10 of this application also requires in step (D) feeding such an oxygen-rich stream into the flame in which the fuel is combusted.

Claims 2-7, 9, 11-16, 18 and 20 all contain this requirement, since they depend from claim 1 or claim 10.

One significant reason that the claims are not obvious from the cited combination of references is that Beer teaches away repeatedly from introducing any oxygen-rich stream into the combustion that occurs between the fuel and the air that are fed into the combustion device of Beer.

For instance, Beer states at column 2, lines 22 and 27, that the flame zone in the center of the flame, or the flame core, is fuel-rich, meaning low in oxygen. More to the point, Beer refers repeatedly to the depletion of the oxygen concentration (column 2, line 36), and to the oxygen depleted region of the core of the flame (column 2, line 49), and to the use of oxygen depleted combustion air (column 2, line 53), and to obtaining low oxygen conditions that also inhibit NO_x production (column 2, lines 57-58), and to a highly fuel rich (meaning low-oxygen) region near the core of the flame, "substantially isolated from the surrounding oxidant" (column 2, lines 61-63).

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These teachings indicate strongly that no additional oxygen (and thus no oxygen-rich stream) should be introduced into the flame that is obtained on the combustion technique taught by Beer. To add an oxygen-rich stream into that flame would violate the teachings of Beer.

Therefore, whereas the Office Action asserts that it would be obvious to separate air into an oxygen-rich stream as taught by Marin and to feed that oxygen-rich stream into the combustion process disclosed by Beer, the reality is that the cited references do not support such a combination because Beer itself teaches away from feeding such an oxygen-rich stream into the combustion device.

This means that the references cited in this rejection do not support the conclusion of obviousness. Instead, the references cited in this rejection indicate that applicant's claims are not obvious because they require a step (feeding the oxygen-rich stream into the flame) that the Beer reference teaches away from. As noted above, that step is present in every rejected claim.

Therefore, the rejection of claims 1-7, 9-16, 18 and 20 under 35 U.S.C. 103(a) over Beer in view of Marin can and should be withdrawn.

The rejection of claim 10 and claims 11-16, 18 and 20 dependent from claim 10 should be withdrawn for an additional reason. That is, claim 10 requires in step (E) that air from a source other than the burner is added to the burn out zone, whereas the principal reference (Beer) does not disclose or suggest such a feature. Indeed, once again Beer teaches away from such a feature. Marin does not disclose or suggest this feature either. It therefore

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follows that claims 10-16, 18 and 20 are unobvious for this additional reason as well.

Claims 8, 17 and 21 stand rejected under 35 U.S.C. 103(a) over Beer in view of Marin and further in view of U.S. Patent No. 4,257,763 ("Reed"). This rejection is respectfully traversed, for the reasons set forth above with respect to claims 1-7, 9-16, 18 and 20. That is, claims 8, 17 and 21 all include a step in which an oxygen-rich stream is added to the flame, whereas Beer teaches away from such a feature. This feature is in claims 8 and 17 through dependency from claims 1 and 10, respectively, but the feature is in step (C) of claim 21.

In addition, claim 17 includes a feature in step (E) (through dependency from claim 10) that air from a source other than the burner is added to the burn out zone, whereas the principal reference (Beer) does not disclose or suggest such a feature. Indeed, once again Beer teaches away from such a feature. Marin and Reed do not teach or suggest this feature.

Since the rejected claims all contain features that Beer teaches away from and the other references do not suggest, the rejection of claims 8, 17 and 21 can and should be withdrawn.

Claim 19 stands rejected under 35 U.S.C. 103(a) over Beer, Marin and Reed further in view of U.S. Patent No. 5,809,910 ("Svendsson"). This rejection is also respectfully traversed, for the reasons set forth herein with respect to claim 10 (from which claim 19 depends). That is, claim 19 includes a step that requires feeding an oxygen-rich stream into the flame in which the fuel is

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being combusted, whereas Beer teaches away from such a step. Also, claim 19 includes a step (E) in which air from a source other than the burner is added to the burn out zone, whereas the principal reference (Beer) and the other references do not disclose or suggest such a feature. Since claim 19 includes features that the cited references teach away from and do not suggest, the rejection of claim 19 can and should be withdrawn.

For all the foregoing reasons, it is respectfully submitted that all pending rejections of claims 1-21 can and should be withdrawn.

Respectfully submitted,



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